

<b>Notice of Allowability</b>	Application No.	Applicant(s)	
	09/735,630	OZEKI ET AL.	
	Examiner Cicely Ware	Art Unit 2634	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to 03 September 2004.
2.  The allowed claim(s) is/are 1-6, 8-17 renumbered as 1-6, 7-13, 15, 11, 14, 16 respectively.
3.  The drawings filed on 03 September 2004 are accepted by the Examiner.
4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All
  - b)  Some\*
  - c)  None
 of the:
  1.  Certified copies of the priority documents have been received.
  2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
  - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of
 Paper No./Mail Date \_\_\_\_\_.
7.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application (PTO-152)
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.

## REASONS FOR ALLOWANCE

1. The following is a statement of reasons for the indication of allowable subject matter: The instant application discloses a digital signal receiver comprising: an input terminal for receiving an input signal with digitally-modulated; at least two variable gain amplifiers coupled in series to said input terminal for controlling the level of the input signal; an analog-to-digital (A/D) converter for receiving an output of said variable gain amplifier; a level comparator coupled to an output of said A/D converter for comparing a level of the output of said A/D converter and a reference level; a loop filter coupled to said level comparator; and a control voltage generator for generating control voltages for controlling said variable gain amplifiers based on an output of said loop filter. Prior art references show similar methods but fail to teach: **“wherein an operation-starting point of any said variable gain amplifier is shifted using the control voltages when a level fluctuation response speed of any of said variable gain amplifiers is lower than a reference level”**, as in claim 1; **“the operation-starting point is shifted based on an average of the control voltage for said any of said variable gain amplifiers and a fluctuation frequency of the control voltage for said any of said variable gain amplifier”**, as in claim 4; **“the operation-starting point is shifted based on an average of the control voltage for said any of said variable gain amplifier and a level fluctuation amplitude of the input signal”**, as in claim 5; **“the operation-starting point is shifted based on the control voltage for said any of said variable gain amplifier and an electric power ratio of an adjacent channel and a desired channel”**, as in claim 6; **“the bandwidth is controlled based on average**

**values of the control voltages and fluctuation frequencies of the control voltages**", as in claim 8; "**wherein the bandwidth is controlled based on average values of the control voltages and a level fluctuation amplitude of the input signal**", as in claim 9; "**a ghost detector coupled to an output of said demodulator for detecting a delay time of ghost, comprising: a delay unit for delaying the output of said demodulator, a ghost calculator for calculating the delay time and an energy of ghost, a coefficient unit, and an averaging unit for calculating a coefficient of said coefficient unit, wherein a number of times of averaging at said averaging unit is controlled based on the delay time**", as in claim 10; "**wherein an operation starting point of said variable gain amplifier is shifted based on the delay time**", as in claim 11; "**wherein a bandwidth of said loop filter is controlled based on the delay time**", as in claim 12; "**wherein an operation-starting point of said variable gain amplifier is shifted based on the CN ratio**", as in claim 13; "**wherein a bandwidth of said loop filter is controlled based on the CN ratio**", as in claim 14.

### **Conclusion**

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cicely Ware whose telephone number is 571-272-3047. The examiner can normally be reached on Monday – Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone numbers

Art Unit: 2634

for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

*Cicely Ware*

cqw

November 30, 2004



AMANDA T. LE  
PRIMARY EXAMINER